

The Effect of Reading from Screen on The 5th Grade Elementary Students' Level of Reading Comprehension on Informative and Narrative Type of Texts^{*}

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Abstract

Digital medias that become popular through the development of technology have given a different functionality to read write experiences. The new conceptions such as reading from screen, e-literacy, digital text etc. have gained currency. The aim of the research was determined as the effect of reading from screen upon the levels of reading comprehension of the fifth grade elementary school students in the informative and narrative text types. In the study, the pretest-posttest control group design was used. The participants consisted of 60 students studying at an elementary school located in the central district of Sakarya. Totally six texts were chosen to utilize in the study and the participants in control group were assigned to read the printed materials, while others were reading the version of the same material from screen. The reading comprehension test developed by the researchers was used as an assessment instrument. In the evaluation of informative texts, the five WS and one H method were used in accordance with the constructivist approach that is one of the alternative evaluation approaches, while the questions were being prepared for the narrative texts, the story elements which are generally required to be found in a text, were used and the story map method was prepared accordingly. The analysis of the reading comprehension points was performed through three related evaluations regarding the text category and therefore, two-factor ANOVA was used. As a result, the levels of reading comprehension of the students who read the informative text from screen were significantly higher than others. Moreover, there was no significant difference between the students reading the narrative texts from screen and printed material in terms of the levels of reading comprehension.

Key Words

Reading from Screen, Reading Comprehension, Informative Text, Narrative Text.

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Digital media that have become popular through the development of technology have given a different functionality to the reading and writing experiences. The digital environments which gained importance with the development of technology, brought a different perspective to the reading and writing experiences of individuals while also giving a different dimension to the terms of "reading" and "literacy" (Bearne, 2003). This difference caused the transition from the traditional types of reading and writing to the electronic types of text, while bringing several changes with the transition (McKenna, Reinking, Labbo, & Kieffer, 1999).

Together with the text types that complied with the change, a new type of reading called "reading from screen" has come up. Reading from screen can be defined as the process of reading the individual practises while reading from the computer screen or monitor in line with his/her objective (Güneş, 2009, 2010). One of the fields that are necessary to examine for the effect of any kinds of reading on individuals is the act of reading comprehension. In addition to this, the action of reading comprehension is one of the five basic characteristics of reading education according to "The National Reading Panel Report" (Cunningham, 2001). Onwuegbuzie et al. (2004) define the reading comprehension as the ability to integrate preliminary information of a student with the text that has been read. According to this, the comprehension contains three elements. These are the "reader" to comprehend, the "text" to be comprehended and the "activity" which is a part of the comprehension.

The composition of the elements of the texts from the author and the reader make it include feeling, enthusiasm, excitement, fear or abstract values (Günay, 2007). Different feelings reveal different text types. The main idea of the texts is understood better if the text types are taken into account during reading according to Blaha and Bennett (1993). Perego and Boyle (2000) support the above mentioned situation as well. Because of these reasons, in this study, different types of texts were given to the students and the evaluation was made towards these texts. Although the text types are categorized under three headings as informative, narrative and poem, it was seen that the text types are usually considered as informative and narrative when the literature is observed (Demirel, 1992). In order to comprehend an informative text, it is necessary to look for an answer for the five Ws and one H questions such as who, what, when, where, how and why; and to find a main idea and supporting ideas (Alperen, 1999).

According to Akyol (2006) the narrative texts contain "Stage" phase which gives information about when and where the event takes place; "Main and supporting characters" phase in which the characters are affecting the plot; the "Event" phase that initiates the problem in the text and forms the basis of the text; "Problem solving attempts" phase in which the activities are realized for the solution of the event; "Result" phase which contains the things narrated, and is necessary to be consistent; "Main idea" phase which represents the idea inferred from the text, and finally the "Reaction" phase that states the views of the main character and the reader on the text. In the study, the explanations made about the informative and narrative texts in the process of reading comprehension were taken into consideration.

When the researches related to the subject were examined, it was seen that in the study of Doty, Popplewell, and Byers (2001) there was no difference between the reading comprehension level of the child who reads a text in an electronic environment and that of the child reading from the printed material. However, in Kerr's and Symons' (2006) study it was found that the retrieval of text to be read from screen appeared to be less than the retrieval from printed material. Similarly, in Grimshaw, Dungworth, McKnight, and Morris (2007) it is stated that different types of the electronic story books have no effect on the reading comprehension levels and reading taste, and reading text in an electronic environment takes a longer time. In the research of Greenlee-Moore and Smith (1996) the reading desires and reading comprehension scores of the children who read in the electronic environment were found to be higher when the narration of a text is difficult and takes long time. In Matthew (1995) it was stated that there was an increase in the comprehension of students who used electronic texts.

When the literature is reviewed, a complete "book or an electronic text oriented education process" is not confirmed while it is required to prepare individuals for every sort of environment in the educational process. In the researches conducted, the positive or negative aspects of reading from screen are elaborated. The possible results are open to discussion because there is no study concerning the sort of effects of reading from screen on students' reading comprehension levels in our country. In the light of the findings, it's essential to conduct the present study because the effect of reading from screen on the reading comprehension has not been discussed in terms of the text type.

Purpose

The purpose of the research was determined as the effect of reading from screen on reading comprehension levels of the 5th grade students in informative and narrative text types.

Method

Research Design

This research was conducted in accordance with the experimental model. The experimental models are the most valid and reliable ones which test the cause and effect, the relationship between variables (Fraenkel & Wallen, 2006). Pretest-posttest control group was used in the research.

Participants

The participants were consisted of 60 students who studied in a public school in the central district of Sakarya during 2010-2011 academic year.

Instrument

6 texts were used in the research; 3 of them were narrative and the other 3 were informative materials. Therefore, 6 separate reading comprehension tests were developed. In the evaluation of the informative texts, 5 WS and 1 H method in line with the constructivist approach from the alternative evaluation approaches was preferred. While the questions of narrative texts were prepared, the story elements required to be found in a text were used and story mapping method was prepared in accordance with this.

In the evaluation of the texts, the points were calculated out of 100 in total. In the 5 WS and 1 H test of the informative text, each of the subjects and main ideas were worth 20 points, each of other 5 WS and 1 H questions were worth 10 points. The main idea for the narrative text was worth 25 points, the result was worth 15 points and each of other elements in the story was worth 12 points. In the point scoring system, point distribution was made equally for the questions, except for the main idea, subject and result. Later in the informative text, because the subject and main idea required the same point, in the narrative text the main idea required a higher level of thinking skill, it was calculated that they were worth 25 points. Other question types were distributed equally by including recollection oriented questions answers to which

were inserted in the text. Text and instruments given to experts for their opinion and we made all necessary adjustments in the instruments based on expert opinions.

Process

In the experiment group, the informative and narrative texts that were chosen in compliance with the content of a school book and conveyed as they were read by each student from the computer screen. In the control group, the same texts were applied weekly in the experimental group by talking to the class teacher and were read from the school book.

Results

Findings for Informative Texts

When the reading comprehension scores of the students in a control and experimental group on I. Text-1, I. Text-2 and I. Text-3 were examined; an increase was observed in their averages statistically in favour of the experimental group. When the averages of the reading comprehension points obtained in the experimental group were compared, it was seen that the average point of I. Text-2 assessments ($\bar{x} = 76.00$) were statistically and significantly higher than the average points of I. Text-3 ($\bar{x} = 72.23$) and I. Text-1 ($\bar{x} = 66.67$).

In the control group, when the averages of reading comprehension points obtained were compared, it was seen that the average point of I. Text-2 assessments ($\bar{x} = 68.50$) was statistically and significantly higher than the average points I. Text-1 ($\bar{x} = 60.33$) and I. Text-3 ($\bar{x} = 56.10$). It was seen that the reading comprehension level was higher than that of the control group in the assessment of I. Text-1, I. Text-2 and I. Text-3. This indicates the effect of the education applied.

Findings for Narrative Texts

When in the experimental and control group, the reading comprehension points of students related to N. Text-1, N. Text-2 and N. Text-3 were examined, it is seen that there was no differences to create a significant effect on the averages in both groups.

Discussion

It was seen that the reading comprehension levels of the students reading from screen in

informative text type were statistically higher than the levels of the students reading from the printed material. In the study that Greenlee-Moore and Smith (1996) conducted with students belonging to an age group of 9-10, a group read from an electronic environment, while the other group read from the printed material. According to the findings obtained, when narration of text is difficult and information density is high, the reading comprehension levels of students were found to be higher towards the text to be read in the electronic environment. The informative texts are long and difficult in the sense that they include a density of general information (Akyol, 1999). The finding obtained by Greenlee-Moore and Smith has the quality to support the finding of the study. This results from the structure of the informative text types. The fact that the structure of the informative texts is more abstract and complex leads to difficulty in comprehension of the printed materials in comparison to the narrative texts with reference to the researches conducted. The fact that the informative texts are texts to be read from screen and their comprehension levels are found to be high, is a point that is worth-stressing.

There was no statistically significant difference between the reading comprehension levels of students reading the narrative texts from the printed material and the students who read them in a computer environment depending upon the other subgoal. The findings of the study that Grimshaw (2007) and others conducted for the differences of children as regards to comprehending and taking pleasure in story books according to the presentation form of books. This situation is consistent with the findings of the research. The author in the narrative texts generally relates an event to the one he/she has experienced or saw. While conveying events in these narrations, a chronological order was followed and it became long. As the narrative texts are long, reading these texts from the computer screen may take too much time for the students. This long reading process might cause troubles for students and it might lower their reading comprehension levels or cause a difference in their reading comprehension levels.

The study conducted by Pearman (2008) refutes these findings. It was seen that the electronic story books used in order to strengthen the reading comprehension skills of the students, affected them in a positive way. The reason for this can be thought that the story books are related vocally and include mobile elements, or the research is conducted at

the 2nd grade level. Matthew (1995) researched the effects of the interactive electronic texts on the comprehensions and attitudes of the 3th grade students towards reading actions. According to the findings obtained, great increases took place in particular points in favour of the students using electronic texts in comparison to the ones using the conventional texts. This finding does not support the findings of the study. The reason for this may be those interactive texts are used and worked with a different age group in the study. It can be said that supporting the stories with mobile pictures and sound effects will have a positive impact on the comprehension levels of the students. It is also shown that some electronic books in entertaining education may divert children's attention from story to other things and affect their ability of memorizing the details of the story adversely, besides encouraging them to read (Trushell, Burrell, & Maitland, 2001; Underwood, 2000). This situation should not be overlooked as well.

In addition to the studies with e-texts, an observation on the studies about text types on printed materials is also considered to be necessary. In the study which was coordinated by Yıldırım, Yıldız, Ateş, and Rasinski (2010) the levels of fifth grade students' reading and listening comprehension were observed and eventually at the end of the study the text types/genres were found as a significant factor in understanding. This finding also supports our study.

According to the findings obtained from the effects of both text types on reading comprehension level, it can be said that reading from screen affects the reading comprehension levels of the students in the experimental group. Doty et al. (2001) examined whether there was any significant difference between the 2nd grade student reading an electronic text and the one reading a conventional printed text without dealing with the text type. According to the results of the study, no statistical differences were found in the reading comprehension points of the students, they refute the findings obtained in the study. The age level that the practise was applied to and the text type used may have affected this situation. The findings of Kerr and Symons (2006) who stated that the recollection of screen based texts was lower than that of the printed materials, were consistent with the findings of the research. The length of the texts and the learning levels of the students who are subject to the application are among the factors that cause this case. In the study of Maynard and McKnight (2001) who examined the effect of electronic environments

on the comprehension and reading rate, no significant difference was found between the comprehension levels of both groups, and it was stated that the reading rates of the students who read in the electronic environment were lower. This finding is not consistent with the findings of the research. The reason behind this can be the fact that the texts are not divided by text types and the levels of reading texts used show differences from cultural perspective.

In the research, the studies related to reading from screen were presented and the relevant possible effects on reading comprehension level in our country were examined from comparative point of view. Depending upon the findings obtained from the research, qualitative and quantitative studies can be conducted to detect the reason for this. The research was restricted only to reading from screen. The prudential researches can be benefited from the sound effects, mobile objects and visual elements.

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